The Use of Jigsaw Technique to Improve Reading Comprehension of The Eighth Grade Students of SMP Negeri 12 Palu

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Abstract

This research was aimed to find out the use of Jigsaw Technique to Teach Reading Comprehension of the Eight-Grade students of SMP Negeri 12 Palu. A quasi-experimental design which consist of experimental and control classes was employed in this research. Students from class VIII A and VIII B comprised the sample of the research with total 51 students. During the data collection the researcher used an instrument including multiple choice and essay tests. Following to data analysis, it was found that the experimental class's mean score had increased from 57.78 to 77.78, while the mean score of the control class increased from 60.36 to 69.52. The hypothesis was accepted according to the researcher's findings because the t-counted was higher than the t-table (4.65>1.678). In conclusion, during the teaching and learning process, implementing jigsaw technique can effectively support students with their reading comprehension.

Keywords: Improve; Jigsaw Technique; Reading Comprehension

Introduction

Reading is an important language skill to learn and has a high level of complexity that everyone needs to learn. It is also supported by Yinger (1987) that reading becomes an important role in the individual and the most important activity for the students in the learning process. Reading can improve our ability to understand the concepts easily. The ability to read well, can provide opportunities for personal fulfillment.

According to the 2013 junior high school curriculum, students should comprehend social function, text structure, and linguistic features when reading texts such as descriptive, narrative, recount, procedure, and report, both orally and written form. Besides that the curriculum is also expected to develop literacy skills in students, Kusmana Suherli (2015) Stated the capacity to read and write is known as literacy, and it extends to skills in listening, speaking and critical thinking.

Teachers should used techniques and procedures that are appropriate for the conditions of the teaching and learning process. But reading is not as simple to learn as it seems. Reading can sometimes be a challenging language skill, particularly for students who still struggle to comprehend the text they are reading.

Based on preliminary observation at SMP Negeri 12 Palu, the researcher found some difficulties faced by students in learning reading. First, due to a limited vocabulary, they were unable to understand certain words when reading a book. Second is, the students...
also get difficulty in identifying the main idea and to understanding the information in the text. Because of this, the students found it challenging to accurately answer the question using the information provided in the text.

Therefore, the researcher proposes a specific strategy in reading, which is jigsaw technique. Arato & Varga (2015) defines within the microgroup, Jigsaw is a framework where members of the group get content sources in segments, such as subject materials, textbooks, references, learning aids, and styles of learning. So, every group member is given a certain set of materials to study and subsequently impart to the other members of the group. By using this technique, students are given the chance to comprehend the reading very well, which means they are obligated to understand the passage of the text.

According to the explanation above, the researcher chooses Jigsaw strategy to improve students’ understanding in reading. It is expected that by using Jigsaw, students can appropriately take information from the text. The researcher assumes that Jigsaw provides an opportunity for students to understand text more easily. In addition, By using this technique, students became more engaged and have easier access to discuss ideas with another students.

Method

The research design employed quasi-experimental. This research used two classes: the experimental class and the control class. There was a pre-test, a treatment, and a post-test for the experimental class. However, the control group also received the pre- and post-tests used a conventional teaching approach. Arikunto (2013) proposed the research design is as follows:

\[
\begin{array}{ccc}
E & O1 & X & O2 \\
C & O3 & O4 \\
\end{array}
\]

Where:
E: Experimental Class
C: Control Class
O1 O3: Pre-test
O2 O4: Post-test
X: Treatment

Students in grades eight at SMP Negeri 12 Palu was the population of this research, divided into classes A and B there were 27 students in class A and 24 students in class B. Then, the total population was 51 students as shown in the following table.

<table>
<thead>
<tr>
<th>No.</th>
<th>Classes</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VIII A</td>
<td>27</td>
</tr>
<tr>
<td>2</td>
<td>VIII B</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>51 students</td>
</tr>
</tbody>
</table>

The sample is chosen using total sampling since eight-grade students are divided into two classes and utilized a quasi-experimental with two groups. It implies that the research sample is the entire population. This research variables are divided into independent and dependent variables. The implementation of the jigsaw technique was the independent variable, and the students reading comprehension was the dependent variable.
Results

The results of the investigation and the data analysis are presented by the researcher in these findings. At SMP Negeri 12 Palu, the researcher conducted the study from March 20 to April 25, 2024. In gathering the data, the researcher used tests as the instrument of the research and the outcome is presented as numerical data. To specify the deviation score, which represented the difference between the students pre test and post-test results as shown in the table:

<table>
<thead>
<tr>
<th>No</th>
<th>Initial</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Deviation</th>
<th>Square Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AD</td>
<td>57.14</td>
<td>88.57</td>
<td>31.43</td>
<td>987.84</td>
</tr>
<tr>
<td>2</td>
<td>AF</td>
<td>62.86</td>
<td>85.71</td>
<td>22.85</td>
<td>522.12</td>
</tr>
<tr>
<td>3</td>
<td>ADK</td>
<td>77.14</td>
<td>91.43</td>
<td>14.29</td>
<td>204.20</td>
</tr>
<tr>
<td>4</td>
<td>AHP</td>
<td>45.71</td>
<td>57.14</td>
<td>11.43</td>
<td>130.64</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
<td>28.57</td>
<td>51.43</td>
<td>22.86</td>
<td>522.58</td>
</tr>
<tr>
<td>6</td>
<td>DP</td>
<td>51.43</td>
<td>85.71</td>
<td>34.28</td>
<td>1175.12</td>
</tr>
<tr>
<td>7</td>
<td>FG</td>
<td>37.14</td>
<td>51.43</td>
<td>14.29</td>
<td>204.20</td>
</tr>
<tr>
<td>8</td>
<td>FRA</td>
<td>34.29</td>
<td>51.43</td>
<td>17.14</td>
<td>293.78</td>
</tr>
<tr>
<td>9</td>
<td>HAR</td>
<td>57.14</td>
<td>94.29</td>
<td>37.15</td>
<td>1380.12</td>
</tr>
<tr>
<td>10</td>
<td>INI</td>
<td>51.43</td>
<td>77.14</td>
<td>25.71</td>
<td>661.00</td>
</tr>
<tr>
<td>11</td>
<td>I</td>
<td>57.14</td>
<td>80.00</td>
<td>22.86</td>
<td>522.58</td>
</tr>
<tr>
<td>12</td>
<td>JMY</td>
<td>62.86</td>
<td>88.57</td>
<td>25.71</td>
<td>661.00</td>
</tr>
<tr>
<td>13</td>
<td>MAP</td>
<td>57.14</td>
<td>77.14</td>
<td>20.00</td>
<td>400.00</td>
</tr>
<tr>
<td>14</td>
<td>MGS</td>
<td>77.14</td>
<td>82.86</td>
<td>5.72</td>
<td>32.72</td>
</tr>
<tr>
<td>15</td>
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<td>51.43</td>
<td>77.14</td>
<td>25.71</td>
<td>661.00</td>
</tr>
<tr>
<td>16</td>
<td>MDL</td>
<td>54.29</td>
<td>80.00</td>
<td>25.71</td>
<td>661.00</td>
</tr>
<tr>
<td>17</td>
<td>NAP</td>
<td>57.14</td>
<td>80.00</td>
<td>22.86</td>
<td>522.58</td>
</tr>
<tr>
<td>18</td>
<td>NZA</td>
<td>48.57</td>
<td>77.14</td>
<td>28.57</td>
<td>816.24</td>
</tr>
<tr>
<td>19</td>
<td>PPS</td>
<td>77.14</td>
<td>85.71</td>
<td>8.57</td>
<td>73.44</td>
</tr>
<tr>
<td>20</td>
<td>RS</td>
<td>51.43</td>
<td>77.14</td>
<td>25.71</td>
<td>661.00</td>
</tr>
<tr>
<td>21</td>
<td>REB</td>
<td>77.14</td>
<td>88.57</td>
<td>11.43</td>
<td>130.64</td>
</tr>
<tr>
<td>22</td>
<td>R</td>
<td>60.00</td>
<td>82.86</td>
<td>22.86</td>
<td>522.58</td>
</tr>
<tr>
<td>23</td>
<td>RV</td>
<td>37.14</td>
<td>51.43</td>
<td>14.29</td>
<td>204.20</td>
</tr>
<tr>
<td>24</td>
<td>RF</td>
<td>77.14</td>
<td>88.57</td>
<td>11.43</td>
<td>130.64</td>
</tr>
<tr>
<td>25</td>
<td>SS</td>
<td>77.14</td>
<td>80.00</td>
<td>2.86</td>
<td>8.18</td>
</tr>
<tr>
<td>26</td>
<td>MAI</td>
<td>71.43</td>
<td>82.86</td>
<td>11.43</td>
<td>130.64</td>
</tr>
<tr>
<td>27</td>
<td>MAI</td>
<td>71.43</td>
<td>82.86</td>
<td>11.43</td>
<td>130.64</td>
</tr>
<tr>
<td>Total</td>
<td>540.00</td>
<td>12742.16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the above table, the pre-test highest score in experimental class was 77.14 and the lowest score was 28.57. The post-test highest score was 94.29, and the lowest score was 51.43. After treatment, it indicates that there was an improvement.
Based on the table above, the pre-test highest score 77.14, while the lowest score was 42.86.

Next, using Arikunto’s (2013) formula, the researcher calculated the experimental group's sum of square deviation:

\[ \Sigma y^2 = \Sigma y^2 - \frac{(\Sigma y)^2}{N} \]
\[ \Sigma y^2 = 12742.16 - \frac{(540.00)^2}{27} \]
\[ \Sigma y^2 = 12742.16 - \frac{(291600)^2}{27} \]
\[ \Sigma y^2 = 12742.16 - 10800 \]
\[ \Sigma y^2 = 1942.16 \]

Based on the computation above the researcher obtains the experimental group's sum-squared deviation, 1942.16.

\[ \Sigma y^2 = \Sigma y^2 - \frac{(\Sigma y)^2}{N} \]
\[ \Sigma y^2 = 3877.14 - \frac{(220.00)^2}{24} \]
\[ \Sigma y^2 = 3877.14 - \frac{(48400)^2}{24} \]
\[ \Sigma y^2 = 3877.14 - 2016.67 \]
\[ \Sigma y^2 = 1860.47 \]

Based on the computation above the researcher obtains the control group’s sum-squared deviation, which is 1860.47.
The researcher determined the value of \( t \)-counted, which is 4.65, by looking at the computation above.

**Testing Hypothesis**

Using a 49 degree of freedom (df) and a 0.05 level of significance, the test rule is that the \( t \)-counted value is higher than the \( t \)-table. The researcher used the interpolation formula to ascertain the acceptance or rejection of the hypothesis:

\[
I = t_{min} - (t_{min} - t_{max}) \frac{d f_1 - d f_{min}}{d f_{max} - d f_{min}}
\]

Where:

- **I** = Interpolation
- \( t_{min} \) = critical value of minimum degree of freedom
- \( t_{max} \) = critical value of maximum degree of freedom
- \( d f_1 \) = degree of freedom
- \( d f_{min} \) = minimum degree of freedom
- \( d f_{max} \) = Maximum degree of freedom

Degree of freedom (df) = 49

Level of significance = 0.05

\( t_{min} \) = 1.684

\( t_{max} \) = 1.671

Finally, the researcher discover that that the \( t \)-counted (4.65) was higher than \( t \)-table (1.678) using the 0.05 level of significance with the degree of freedom (df = 49). This shows that the hypothesis in this research is accepted. In short, jigsaw technique can improve students reading comprehension at SMP Negeri 12 Palu.

**Discussion**
Students reading comprehension in experimental class can improve significantly because by using jigsaw technique. Jigsaw technique can allow students to develop creativity, abilities, and power problem solving according to their own purpose. According to Wiyono Cahyaningtyas Tannaya, Rr hasti Robiasih (2019) in this technique they can discuss and sharing knowledge also can provide engaging group activities to assist students in developing their reading skills. The successful use of the jigsaw technique also supported by Ayu Citra, Wida Rianti, Putri Asilestari (2021) who found that with the help of the jigsaw technique, the students were engaged in cheerful and enjoyable reading, and their comprehension of the material was improved via class discussions.

Moreover, the researcher could saw the students found the detail information in the text more easily, also the students enthusiastic in class because they can share their opinion each other. Additionally, the researcher saw the vocabulary of the students improved because from group discussion they could find vocabulary so as to create new vocabulary. However, vocabulary is crucial in understanding text as stated by Alshehri Ahmad (2023) vocabulary is important predictor for comprehending written texts. Most of the student's score was increase but not all of them can attain the minimum standard score (KKM) nonetheless, this technique can help students to find new information, make them enthusiastic during the learning process, and improve the student's vocabulary. So, the teacher can try to apply jigsaw technique in order to help student's to comprehend English text especially descriptive text.

Conclusion

Based on the research findings, the researcher concludes that using jigsaw technique can improve the reading comprehension of the eighth grade students of SMP Negeri 12 Palu. The outcome proves that the mean score of the pre-test of the students is 57.78 and the post-test is 77.78. Then, the t-counted value (4.65) was higher than the t-table value (1.678). It was demonstrated that the hypothesis is accepted. Particularly, the jigsaw technique can improve reading comprehension of the eighth-grade students of SMP Negeri 12 Palu.

Acknowledgment

The researcher would like to thank all of the Junior High School 12 Palu students for their enthusiastic involvement. With special thanks to the English teacher for all of her help and advice. The researcher expresses gratitude to the supervisor, co-supervisor, and reviewer for their invaluable support and input, which helped to refine this research. Thank you to everyone who encouraged me, your combined efforts were very important in getting this research finished.

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operative learning. University of Pecs, Faculty of Humanities, Institute of Education Sciences.


